Notebook, N-06-07-09

Burrs made -
All rings on after pkg
all tubes nickel plated —

1178 5 nickel plated tubes in each group
35000 green thru 20 mesh fines all in -
16 cc Ethyl alcohol work in air till dry
enough
6665 glucose - 15000 Co flake thru 20
100 Double Tamps, 3½ lb Wt 5" drop -
Tamps
Wt

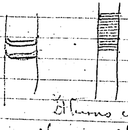
1179 T
Wt

1180 T
Wt

1181 T
W

1182 T
W

July 9th 1906 – We now have a new loading machine imitating the old idea of packing made in glass tubes 4 years ago, got it now so it is even increments first put in measured quantity of flake Co then of green NiOH, then 2 tamps 3½ lb wt falling 5" Then again do this again 37 milg green & 16 milgms Co flake making 100 sections in a 3 inch Tube. On Cutting open the tube by a saw it is seen that the filling is equal. The flake is separate from green & this will probably do the business if it runs well for 3 or 4 months in half cell. It cheapens & simplifies mfg to get rid of the glucose mix & we are now trying putting in green then flake & tamping instead of the reverse. To make it perfect, probably there should be 50 sections of green & flake to one inch of tube = The green could be soaked in alcohol etc if lubricant is found desirable



This is way of flake when sawed tube lengthwise –

It turns up when using plunger slightly rounded.

Made

16 milg flake 37 milg green

1183 5 ni plated Tubes
35000 green thro 20 mesh all fine in
15000 Co flake thro 20.
Put in Tubes dry by the 2 plungers
100 Sections double Tamps,
No glucose,
Lot 6,103 2 makes 111 Sections
T111 in Reg 3" tubes.
Cal 274 9/1000 Rings

1184 Lot 6,023
T 100
Cal 274

1185 Lot 6,440
T 100
Cal 273

1186 Lot 6,332
T 100
Cal 274

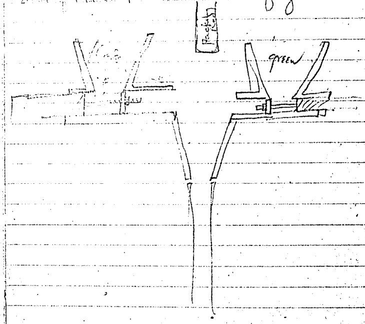
1187 Lot 6,482
T 100
Cal 273

Put right in 21% for several hours before going up

Green 1st then flake, then Tamp –

4390 green

[illegible] going to throw green & flake in
[illegible] by how that works —
[illegible] flake [illegible] advance of green



1188 5 nickel plated tubes.
35000 green
15000 flake
The green hopper to be heated up
The green to be heated to 150 [illegible]
& tube filled with double plunger
feed 100 sections - Double Tamps

Lot
T

1189 Lot
T

1190 Lot
T

1191 Lot
T

1192 Lot
T

1193 = 5 nickel plated Tubes -
35000 green thru 20.
16 cc Ethyl alcohol
15000 Co flake thru 20 ½ thickness of Reg flake
6665 glycerine
10c Double Tamps

LOf
T

1194 LOf
T

1195 LOf
T

1196 LOf
T

1197 LOf
T

1198 Dup of 1193
Except 7500 Co flake ½ Thickness

LOf
T

1199 LOf
T

1200 LOf
T

1201 LOf
T

1202 LOf
T

1203 5 ni plated tubes,
35000 green fluo 20
16 cc Ethyl –
30000 Co flake twice as thick as req
6665 glucose –
100 Double Tamps;

Wt
T

1204 Wt
T

1205 Wt
T

1206 Wt
T

1207 Wt
T

1208 5 nickel plated Tubes
35000 green Ilro 20
15000 Nickel flake Same Thickness as Reg Co
6665 glucose
16 cc Ethyl
100 Double Tamps

Wf
T

1209 Wf
T

1210 Wf
T

1211 Wf
T

1212 Wf
T

~~1213. Duplicate of 1208~~
~~Except 75 Double T~~

~~cof~~
~~T~~

~~1214 cof~~
~~T~~

~~1215 cof~~
~~T~~

~~1216 cof~~
~~T~~

1217 cof
T

1218 groups co 490 milgm — less weight
than Co flake used
The nickel flake is a little stiffer +
instead of giving 10 mily of flake
as it should for equal weight the
average amount was only 5.66
Section weighed thus
5—5—8—5—5—7— average 5.66
Milgrams —
Tested green + found average —
30-30-33 — Milgrams per section T

Ni flake not run thru Hydrogen

1218 5 nickel plated tubes.
35000 green thru 20 times all in
15000 nickel flake thru 20
Put in in 150 sections, Double T
[redacted]
7 green to 3 nickel — green 1st then flake
green 1st flake 2nd then tamp then Tamp —

Wt 5.819
T

1219 Wt 5777
T

1220 Wt 5683
T

1221 Wt 5669
T

1222 Wt 5.695
T

average 5728

4.817 greens

1223 – 5 Ni plated tubes,
packed with Regular grafite mix –
100 Double Tamps

Lot
T

1224 Lot
T

1225 Lot
T

1226 Lot
T

1227 Lot
T

Iron though 20 mesh on 100 mesh
10 flake 26 of gram mg per section

1228. Two nickel plated tubes,
Ferric hydrate by precipitation made
just like we make green Ni hydrate
Thro 20 mesh all fines in—
Cobalt flake 3 to 1/7 of iron—
Packed in 100 sections by new
Plungers— Double Tamped run with
6 nickel, 4 grm

Wt 7.257
T

1229 Wt 7.384
T

5.225 Fe Hydroxide.

2.717 metallic

1230 Two nickel plated tubes
Ferric hydrated precipitated with
15% of Mercury by same process
as we use for making Ni hydrate,
put in in 100 sections / by plungers.
Double Tamps

Wt 6.689
T

1231 Wt 6.635
T

1232 = Dup of 1230 Except
35000 ferric hydrate
15000 Co flake
6665 g [illegible]
16cc [illegible] -
100 Double lumps -

Cut
T

1233 Cut
T

Save balance mix

~~1234 Ni tubes,~~
~~35000 Reg mix Iron~~
~~15000 Cobalt flake~~
~~Put in by new plungers, 7 of Iron~~
~~to 3 of flake – 100 sections.~~
~~Double Tampers – Tamp after flake~~
~~goes in~~

~~Coof~~
~~T~~

~~1235 Coof~~
~~T~~

1236 Coof
T

1237 - 5 nickel tubes
packed in 100 sections
Double Tamps 7 green to 3
Cobalt flake. The green to
be warmed to 150 [illegible] for the when
filling - after agitating in a heater
hot [illegible] in 21% KOH

~~[illegible]~~

(Green 1st then flake then tamp.)

W.f
T

1238 W.f
T

1239 W.f
T

1240 W.f
T

1241 W.f
T

1178 to 1241
When packed dry the
Green is put in first
then the flake then tamped
then flake, green & tamped
& so on

J' Made

1242 5 Nickel plated Tubes
Packed 7 green thru 20
3 Co flake thru 20
but in this case the Flake
put in first then the Green then
tamped 1/2 oz & 150 sections
Wt 6,280
T

1243 Wt 6,298
T
Small crack one end

1244 Wt 6,212
T

1245 Wt 6,220
Small crack one end T

1246 Wt 6,072
T
Small crack one end

1247 5 ml tubes

35000 green lines 20
15000 Coff Cake lines 20
6665 g Calcium —
16_{cc} Ethyl —

This is to be used to try if the
of Cake plunger will put it
into the tube ok — 100
D Tamps.

Wt
T

1248 Wt
T

1249 Wt
T

1250 Wt
T

1251 Wt
T

Moze ✓

1252 = 5 Ni plated tubes
packed with new plunger.
7 of green thru 20
3 Ch Bart flake thru 20
150 section - Double Tamps

Wt 6.211 | 25 mly green
| 10 mly Co flake
T
Cal 272

1253 Wt 6192
T
Cal 274

1254 Wt 6.227
T
Cal 272

1255 Wt 6.162
T
Cal 273

1256 Wt 6.271
T
Cal 272

Green 1st then flake then Tamp

Cut open 1" & found it OK in
layers & turned up at
Edges.

4.348 green

1257 - Dup of 1252
but 200 Sections Double Tampa
Wf
T

1258 Wf
T

1259 Wf
T

1260 Wf
T

1261 Wf
T

1262 = Green thro 40 mesh / fines all in
7 / green 3 Cu flake
100 Section Double T

Lot
T

1263 Lot
T

1264 LOT
T

1265 Lot
T

1266 Lot
T

1267 Dup of 1257 - green through
100 mesh fines ncd in
100 Sections Double T

Wt
T

1268 Wt
T

1269 Wt
T

1270 Wt
T

1271 Wt
T

1272 = 5 Ni Tubes green, this 20 [illegible] not [illegible] -
7 green 3 Co flake of twice the
thickness of Regular flake occupys
1/2 the bulk so you must change
feed — 100 sections — D Tampa

Wf
T

1273 WT
T

1274 Wt
T

1275 Wf
T

1276 Lwf
T

1277 = 5 ni [illegible]
8 green 2 Cobalt flake
100 Sections Double Tamp Dry pk'd

21,000 green
5 ton flake

Wt
T

1278 Wt
T

1279 Wt
T

12 80 Wt
T

12 81 Wt
T

1282 5 mi - green thru 20 [illegible] allow.
9 green 1 Cobalt flake thro 20
100 Sections DT Dry pkg

21000 green
3000 flake -

LOT
T

1283 LOT
T

1284 LOT
T

1285 LOT
T

1286 LOT
T

1287 = 5 ni Tubes - Dup of 1183
Except the green is the latest
made at Silver Lake with new Copper
Cooling tubes in big Tanks -
Its in Iron Can — Thru 20 fuses all in

LOT
T

1288 LOT

1289 LOT

1290 LOT

1291 LOT.

It shows that pocket of the pkg
had 85% of the original alcohol
in green — green 3,940 — as against
4,320 without alcohol, showing
that alcohol increased the bulk
it [illegible] also because
outside of tube showed green
[illegible] perforations to outside.
Hence Ethyl will give porosity
all right & lubrication!

Tube dried out in oven after assembling & before going with KOH

Made

1292 - 5 in tubes
7 green saturated with Ethyl alcohol & dried so it just flows ok 3 Co flake — same size plunger as would be used had 37 Mlg of dry green *
150 Pounds Tamped - ring of tin pkg
Wt 6.674

1293 Wt 6.676

1294 Wt 6.743

1295 Wt 6.837

Small crack one end

1296 Wt 6.979

Note increase in weight as longer green is kept - 67 148

* The green used in this group thru 20 tubes is 40000 Milgms - Wet strongly with Ethyl alcohol & then worked in dish by watch glass - flowing till dry enough to flow well. The weight when dry enough was 49650 Milgms - Kept it in bottle & stopper closed to air while filing —

$Ni(OH)_2$ used to 1297 in this batch is green that don't absorb H_2O spontaneously & had use Ethyl

green 26 mg/ graphite 12 mg per section.

1297 2 tubes – Reg green with 20 fins in 150 sections
Use large graphite flake & same capacity in flake plunger weighs

Lot 5.382

No caps in ends
1298 Lot, 5442
No caps in ends

~~4.329~~ green

3.78 green

Showed gave ~~9.5~~ 756 at 1 [illegible] to 6 hrs
good no flat pockets,
per gram green 2.11
factor.

1299- 2 tubes, Use regular Iron mix 25 milg Iron 10 milg Co flake 150 sections double stamps

Wt 10.211

1300 Wt. 10.293.

6 heavy nickels – 3.5 each –

72% Fe oxide –

5.145 metallic

Should give 1.793 to Wt, 7.175 oxide

1301- 2 tubes.

12 mlg green^{Ni} through 40 mesh fuses all in
5 " Co flake^{Chunks} 300 Sections -
DT Wt - 6.513

1302 Wt - 6.324

4.492 green

1303 - 5 tubes thro 20 furnace

24 Mils Green 6 mg Co flake ½ Reg flake
150 Sections – DT –

Wt

1304 Wt

1305 Wt

1306 Wt

1307 Wt

flake Co is ½ the thickness of the
Reg 1/10000 flake,

1308. 2 tubes

12 mlg green thru 40 mesh finer all in
5 " Nickel flake thru 20
300 sections, DT

Wt 6173

1309 - Wt. 6.270
Small cracking end

4.350 green ✓

1310 2 tubes

1311 12 mlg green thru 40 fines all in
5 Cobalt flake 1/2 thickness of Regular
flake, or 1/20000. 300 sections,
DT

3110 LOT 5.810 -

1311 LOT - 5.848

4.093 green

The flake is soft & bends over all kinds
loops σ & ∞. not flat like [illegible] Ni
flake which also turns. It gives a dull
thud on tamping. Even the 2nd tamp is
also dull. Ni flake would be
OK for this thickness,
say 2 of the $\frac{1}{20000}$, 300 section to 3"
tubes would be OK —

Made

1311½ Flat pockets reg iron mix –
4.8 grammes, [illegible] pressed with
20 atmos – pockets smooth & corrugated
20 atmos – 4 mi 3.5

No cake –

1312 –

Made

1313, Dup of 3111½ Except 40 alumin
[illegible], Smooth & Corrug

1314,

Made

13 15 Dup 3111½ Except 60 alumins
[illegible] Smoothing Car

13 16

Made

1317 Dup of 3111 Expt 80 atmospheres
~~[illegible]~~, Swinging Carriage

1318 –

Flake 1st green after then tamp

1319 = 2 tubes -
450 sections - Cobalt flake,
6 mlg flake 7 mlg green thru 60 mesh
Cobalt flake 1/2 thickness
of Regular size or 1/20000 -
.01

Wt 7.520.

1320 - Wt, 7.549. 4.045 green

Only made One tube - 1319

as Fred Ott made mistake & got 6 mlg
flake instead of 3 -

7549
7
5284.3
green

1320 is probably made right
3 mlg flake & 7 mlg green
Flake 1st -

10/70.

This is Curious 5284 green

Possibly 1319 was ok but end slipped
towards last when we weighed &
found 6 mg flake instead of 3 -

Flake 1st green 2nd then Temp

1321 = 2 Pockets — Ni flake not passed thru Hydrogen —

450 sections,

2 1/2 Milg of NICKEL FLAKE

1/2 thickness or 1/20,000 – 6 milg

green thru 60 mesh = DT.

LOT

1322 LOT,

Ni flake not passed thru Hg

1323= 2 [illegible], Tubes

Regular Iron - 2½ mils Nickel flake ½ thickness of Drag or $\frac{1}{20000}$ — 6 mils Red mix black iron 450 sections, DJT.

WT

1324 W.T.

1325 = Reg Iron 6·5 grm pkts
Run with 4 nickels 3·5.

1326

1327 Make

1328

green 1st – flake 2nd –

1329 2 tubes
300 sections, 5 mg flake Co
½ thickness — 12 green lines
60 mesh heated on heater
for over 1½ hours & used
hot. [illegible]

wt 5.935

1330 wt 6.040

4.160 green

Pack on machine putting both
flake & green in simultaneously!

1331 2 Tubes. green thru 60 mesh fine in
300 sections 5 mlg Nickel flake
12 mlg of green No 2294 —
Containing 9% of Bismuth Oxide
Bi_2O_3 —)

Wt 6.615

1332 Wt, 6.650

4.6410 green

Flake in first green second -

1333 - 2 tubes.
300 Sections - 5 miligrammes of
Cobalt flake - 12 milg of
No. 70 abragast Nonpyrophoric
iron with 10.8% Hg Dope D.T.

Wt 13.259

1334 Wt - 12.483

10,000. Fe mix

1335 = 2 Liter –
flake & green Both dumped in at once
5 milg Nickel flake not thro
Hydrogen & not thro alcohol.
duller than when alcohol
is used – 12 green thro 60 –
mesh fines all in –

300 Sections green Wet with
alcohol & dried out enough
to handle in filler –
DT –

Wt 7069

1336 Wt 7210

4.997 green

green stuck in mold –
Little too moist

Both flake & green go in simultaneously -

1337 - 2 tubes.

5 mg Co flake Reg
12 " green thru 60

Heated to 300 degrees ~~water bath~~ & used at once keeping cover over Hopper of packing mac

300 - sections, DT -

Wt 6.537

1338

Wt: 6,735

4.645 green

1339 2 tubes—

10 mdg flake Nickel
24 " green Chro 40—
150 sections flake & green both
put in at once, DT
simultaneously
WT's

1340 WT

1341 –

10 mlg ~~Nickel~~ Cobalt flake 24 mlg of the Black Bismuth Nickel Hydrate now drying on the shelf – Its thro 40 + Black stuff & flake to be put in simultaneously
150 sections DT

Wt 8.353

1342 Wt 8.463.

5.847 Bi Green

This shows large quantity Bismuth in green – Last night the mix thro 40 mesh looked black – under micro about 2/3rds was black 1/3 green but this morning after drying it was all green except few particles, so the black stuff must have decomposed to cobalt.

both thrown in tube simultaneously

10 Mlg flake Cobalt

24 mlg of Black—

1343 2 Tubes, 150 Sec DT

Green thro 40 mesh got hot in water bath 2 hours - then poured in excess of Citrate Bismuth in Ammonia Concentrated, Soaked 1/4 hour then Solution poured off - Water put in for a moment & poured off quickly - Then dried dry on plate, / a Solution of glucose 1 sq inch brick in 1/2 full water in Reg Evap dish to which added Cube inch more or less 21% KOH, - after just under boiling 1 oz of the green with Bi thrown in - Kept just under boil for 20 minutes Then whole poured off & washed 6 or 8 times with boiling water till clear - then added alcohol twice & dried - its very black & heavy -

Wt 8.340

1344 Wt 8.488

5.784 Bi & green -

both put in simultaneously

1345 — 5 milgms 1/2 thickness CoBalt flake 24 milgramm green through 40 mesh — 150 Sections;
DT —

Rubber tipped plunger —
20/1000 thick

COf 5.802

1346 COf 5.654

4.753 — green

Rubber tip comes off frequently & wears badly — Must make rod in sections with rings around to make this principle wk OK — like glow R pkt pressing

Made

1347 2 flat pockets,
3,5 grams of Ferric hydrate same as used in ~~1232~~ 1228 – Used regular pressures
4 nickels –

1348

Had use deep pkts

1349 2 pockets flat —

Ferric hydrate containing 15% of Mercury made by Walter, 4 grammes ~~[illegible]~~ | Regular pressures —
4 nickels —

1350

Made.

1351 2 flat pockets,

5. grammes of No 70
abrogast Iron Nonpyrophoric
Req. pressures -
Use 6 nickels -

1352

Had use deep pkts.

both put in simultaneously

1353-

10 Reg Co flake,
24 green thru 15 mesh fines in -
DT-

Wt 6.307

1354 Wt 6.130

4.340 grms

~~1355~~

~~1356~~

1355 Dup of 1353
Except put in separately
flake first —

LOf 6.251

1356 LOf - 6.312

1357 10 Caf Cake Reg
24 through 60 mesh
put in simultaneously
DT
Wt 6.534

1358 Wt, 6.428

4510 green

1359 Dup of 1357

Except put in separately

flake 1st — DT

LOT 6.396

1360 — LOT 6.370

1361 — 2 Tubes — Screen green thro 20

10 flake Co Reg

24 green No 2175 gwa number

use it just as it is —

DT

flake first, then green

Wt 7.310

1362 Wt — 6.515

1363 = 2 tubes Screengreen thro 20
10 Co flake Req
24 green No 2176 of WA number

Flake first then green D.T.

Wt 6.749

1364 Wt — 6.622

1365 2 tubes Screen greenline 20
10 mlg Coflake Reg
24 " No 2177 Glaze under
flake put in first, green 2nd DT.
its very fine -
Lot 6.276

1366 Lot-6.202

1367 2 tubes

Screen green thro 20

10 Mulg Co flake Reg

24 " Nb 2190 Alcoa number

flake 1st green 2nd Screen thro 20

Wt 6.323

1368 Wt 6.090

its fine but some few big pieces that 20 mesh will take out, 1369 – 2 tubes –

Screen green thro 20

10 Coflake req

24 to 2184 of WA numbers

flake 1st green 2nd — DT

Wt 5,750

1370 Wt 5,603

1371 2 tubes Screen green thro 20

10 mulg Co flake Reg —

24 " } GWA amber 2193

flake 1st green 2nd — DT

Wt 6.040

1372 Wt. 5.900

1373 – 2 Tubes – Screen green ltrs 20

10 Mlg Co flake Reg

24 " J W a number | 2189 -

flake 1st green 2nd —

Wt 5.560

1374 Wt 5.472

1375 = 2 tubes Screen green thro 20
10 mg Co flake Reg
24 " Gwano 2180
flake 1st green 2nd —
wt 6,269

1376 wt, 6,164

1377 2 tubes Screen green thro 20

10 mlg Co flake reg
24. " JWa No 219

flake 1st green 2nd — DT

Wt 5.783

1378 — Wt 5.527

1379 = 2 tubes — Screen green thro 20

10 mlg of Co flake Reg
24 mlg of Wa 2181 —
flake 1st green 2nd — ΔT
LWf

mixed up

1380 LWf.

1381 2 tubes - Screen thro 20

10 mg Co flake Re

24 mg green xo 21 83

flake 1st green 2nd - OT

wt

mixed up

1382 wt -

1383 = 2 tubes

10 mlg Coflake Reg

24 " Reg green thro 20 -

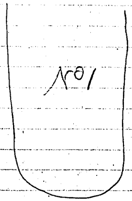
Packed with tamping rods with

Various shapes on End

Wt 6.090

384

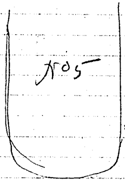
Wt 5.972



4.221 grams

1385 Dup of 1383
Except Tamp –
Wt 6,165

1386 Wt 6,288



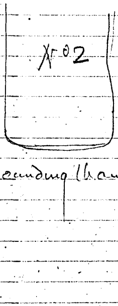
Not so round as No 1

1387 Dup of 1383

Except End plunger

LOT 6.299

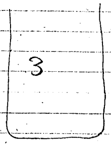
1388 LOT 6.367



Still less rounding than 5

1389 Dup of 1383
Except pkg rod
10f6.443

390 10f6.525

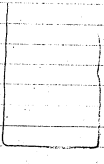


considerably rounded at Edges

1391 Dup of 1383

Wt 6.468.

1392 Wt. 6.364

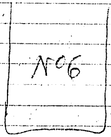


only little rounded.

1393 Dup of 1383
60
Lot 6.565

1394 Lot 6.621

4.615 green



Corners rounded

1395 Dup 1383

Lot 6,513

1396 Lot 6,354

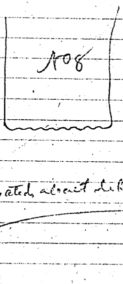
1507

Roughead Ferguson

1397 Dup of 1383
Wt 6.497

1398 Wt-6.336

4.491
green



97 Warped 1/32
1398 " 3/64

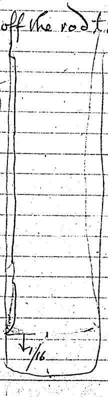
Corrugated about like Cup [illegible]

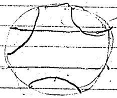
1399 Dup of 1383

Wt 6.390

1400 Wt -6.477

Back off the rod to let air out





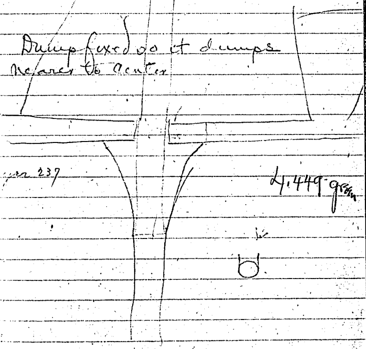
4.503 grams

139 warped 1/32"
140 " 1/32"

1401 Dup 1383

Wt 6.367

1402 Wt. 6.348



Dump fixed so it dumps nearer to center

Re pp 237

4.449 gram

1403 Dup of 1383

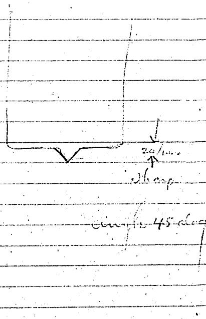
Wt 6.215

1404

Wt 6.330

4.390 green

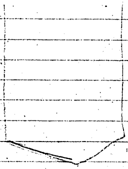
1403 warped 1/32"
1404 " 1/64


20/1000
Sharp
angle 45 deg

1405 Dup 1383
Wt 6.266

1406. Wt 6.220

4.390 gms



14[illegible] warped 1/32
14[illegible] " 1/64

1407 2 tubes—

Use square ended tamp rod
10 flake 24 green — green 1st

Put in green tamp Twice — then put in flake.
tamp once — then green & tamp Twice +
so on —
Spring 1/32 1/32 Wt 6.677

1408 spring 1/32 Wt. 6.596

4.643

1409 Dup of 1407

Except 1 amp green twice &
flake twice –

Sprung 3/64" Wt 6.870

1410 Sprung 1/32" Wt 6.938

4.832 green

411 — 2 tube —

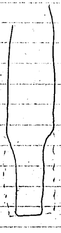
Use square End Tamp rod
15/1000 less diameter than reg
10 flake 24 green — green 1st

DT- ~~green~~

Sprung 1/32" Wt 6.575

Plunger .222

1412 sprung 1/32" Wt 6.352



1413 Dup of 1411

Except Tamp rod is 30/1000 less diameter

Tubes spring 4/32 Wt 6.322

Plunger .207

1414 Wt 6.386

1415 Dup of 1411

Except End tamp rod is
60/1000 less diameter,

Tubes spring 1/32"　Wt 6.087
Plunger - 177.

1416　Wt 6.161

1417 2 tubes,
Square faced tamp tool –
10 flake 24 green —
green 1st =
$2\frac{1}{2}$ lb weight DT
green 1st
Wt 5.771

Tubes sprung 1/32"
1418
Wt 5.910

1419 — 2 tube
Dup of 1417
Except. 1½ lb weight
Wt 5.266

Tubes sprung 1/32"

1420 Wt — 5.326

1421 2 tubes —

10 flake 24 green — square faced tamp tool — DT —

Tubes to have no lap or seam but butted together —
If after 1st one is made it springs open so rings cant be put on abandon it if its OK put on rings tight — green [illegible]
WP

422 WP

When Taken out of mold it sprung open from 212 To 286

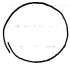
Cut out

1423 = 2 tube –

Dup of 1421 –.

Except tube is lapped but
not hook lapped –

green 1st



LOT

1424 LOT

when taken out of mold sprung open from
272 to 286

Cut out

1425 2 tubes —

10 flake 24 green — square faced tamp rod — DT —

Disolve glycerine in water 1/2 Water 1/2 glycerine — stir well dip tubes in it & dry to throw water off — pack reg — green 1st

Wt 6.384

Plunger 237
Spring 1/32
1426

Wt 6.560

Spring 1/32
~~wt~~

Glycerine run off like water on a ducks back

1427 2 tubes –

10 flake 24 percent square
faced rod – D T L
after packing – carry mould
to hydraulic press – use short
button & give tube 50 atmos
& see if it comes out straight –
green [illegible] WF

128 LOF

Cut Out

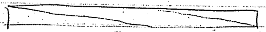
1429 2 tubes —

Extra plated by Caisky
1/2 of 1/1000 on side) thicker
so tubes will be stiffer than
now — 10 flake 24 green ΔT green 1st
CWf

1430 CWf

1431 [illegible]

Make some Lap Tubes spiral



Neuske had one see him + find out how to make 1/2 doz —

1432 2 tubes Burrs outside

Square faced tamp rod - fit rather Close — 10 f Cake 24 green DT green 1st —

Sprung 1/32 Wt 6.118

Plunger 245

1433 Wt - 6.105

Sprung 3/64"

cracked one end

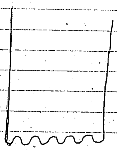
1434 = 2 tubes -

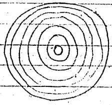
10 flake 24 green green 1st - ØT

Wt 6.272

Plunger 287

Spacing 1/32"





1435 Wt 6.306

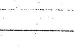
Spacing 1/32"

1436 —

10 flake 24 green green 1st DT

Tubes with double laps

Plunger 222 - Reg plunger to large



Tubes Straight Wt 6.222

1437 Wt - 6.170

Tube Straight

1438 2 Cutes

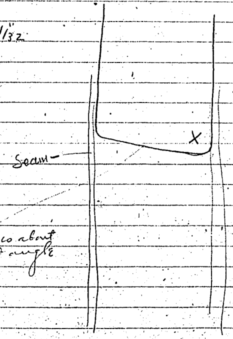
10 f Cake 24 green green 1st DT

Packing tool thus

Wt 6,283

1439 Wt 6,382

spacing 1/32"



[illegible] to about
[illegible] angle

1440 – Dup of 1438

Except reverse the tool
& have X against the seam –

Spring 3/64 Wt 6,289

1441 Wt 6,346
Spring 3/64

1442

10 flake. 24 green green 1st -

After filling drill through the Center 1/16 hole from end to end — after reaming then put in Caps around it 9 lg —

LOP 5.758

1443 LOP - 5.740

Tubes Sprung. Straitened them to drill

Use unplated perforated sheet, + plate afterwards + anneal in Hyd.

1444 – 2 tubes –

Burrs inside but ends filed off so there is twice as much opening as reqd — 10 flake — 24 green DT | green 1ST —

Plunger 250 Wt 6.639
Spring 1/32 cracked both ends

1445 Wt 6.602
Spring 1/32

U

Use unplated block then after grinding
& cleaning plate with Ni & anneal in
Hydrog

1446 – Dup of 1444

Except bars filed nearly all off –
to leave large holes –
cracked one end Sprung 1/32" Wt 6.569

The holes should be thoroughly cleaned
out after filing –

Plunger 250

1447 —— Wt 7.377

Sprung 1/32"
crack one end

~~[illegible]~~ -

Weighed a tube before putting in water & after 10 minutes soaking

Before 8171 gained

After - 9100. ~~[illegible]~~ 929 mlg -

Air comes out very slowly showing holes and channels very small -

Left in all night in at 630PM

out at. 8.05 am

Gained - 1.049

1448. Dup of [redacted] 1431

Top tubes Spiral with 4 rings

Tubes remained Straight in loading Wt 6.312

Plunger ~~[illegible]~~ 237 kg.

1449 Wt 6.420

1450 Dup of 1431

Lap tube Spiral no rings

Tubes remained straight in loading
Plunger 237 wt 6.413.

1451 wt 6.527

1452 2 Ni Tubes Dup 1444 except
2400 Perforation burs filed half off
wt 6.343
Plunger 245.

1453 wt 6.145
spring 1/64

1454 2 Tubes Dups of 1444 Except

2400 Perforation burs all filed off

Plunger 245 wt 6.068

spring 1/64
1/155 wt 6.286

1456 2 Tubes Dup of 1444 Except

Rogers # 1 Perforation

Wt 6.342

Plunger 237

spring 1/32"

1457 Wt 6.270

1458 2 Tubes Dup of 1444 except
Rogers #2 Perforations
wt 6.256
Plunger 237
spring 1/32

1459 wt 6.251

1460 2 Tubes

Rogers #1 Perforation
Flake 10 Green 24 both put in at once

Wt 6.428

Spring 1/32"

1461 Wt 6.388

1462 2 Tubes Rogers #2 Perforations

flake 10 green 24 green + flake both put in at once

Spring 1/64" wt 6.465

1463 wt 6.545

1464 — 3 tubes — Rogers opened eyelet — Nickelplated — 2400 Perforations

Regular plunger 60/1000 less diameter — 10 Co flake 24 green Wire 20 mesh fence all in — put in Simultaneously No 1 style (Flake 1/2 open before green opened)

Wt 6.275

Spring 1/32

1465 Wt 6.043

1466 Wt 6.070

4.641

1467 Duplicate of 1464
Rogers 2400 Perforations
Except No 2 style of
feeding simultaneously
(flake & green opening at same time)
LWt 6,070

Spacing 1/32"
1468 LWt 6,205

1469 LWt 6281

~~6185~~

2400 Perforations

1470 — 3 Rogers eyelet stock
Ni plated —

Regular sized plunger
10 Co flake 24 - thro 20 fines in
fed simultaneously No 1
style —

(flake 1/2 open before green opened)

Spring 1/32 Wt 5,968

1471 Wt 6,060

1472 Wt 6,024

3)18.052
6.017

~~6.017 green~~

2400 Perforations

1473 – Dup of 1470

Except No 2 style of feed simultaneously

(flake & green opened at same time)

Cracked both ends Wt 6.052

Spring 1/32

1474 Wt 6.030

1475 cracked both ends Wt 5.981

3)18.063
6.021

~~6.021 green~~

2400 perforations

1476 = Dup of 1470 –
Except No 3 style

(flake all open before green open)

Wt 5.874

Spring '32

1477 Wt 6.050

1478 Wt 6.025

3)1794.9
5.983

~~5.983~~

2400 Perforations

1479. Rogers Eyletstock Ni plated

Plunger 60/1000 smaller than reg 10 flake NICKEL 24 green thro 20 mesh fines all in fed simultaneously No 1 style

(flake 1/2 open before green open)

Wf

1480 Wf

1481 Wf

2400 Perforations

1482 Dup of 1479

Except feed No 2 style
NICKEL Flake
(flake + green opening at same time)

Wt

1483 Wt

1484 Wt

2400 Perforation

1485 Rogers cyl stock Ni plated

Regular sized plunger
10 (MICKEL) flake 24 green
Wire 20 turns in —
fed simultaneously No 1 style
(flake 1/2 opened before green opened)

Wt

1486 Wf

1487 Wt

2400 Perforation

1488 Dup of No 1485

Except fed No 2 style

(flake & green fed at same time)

NICKEL FLAKE

Wt

1489 Wt

1490 — Wt

2400 Perforation

1491 - Dup of 1485 -
Except No 3 style -
NICKEL FLAKE
(flake all opened before green opened)
Lot

1492 Lot

1493 Lot

This Ni green is very much harder to crush, its also 12% heavier (IE) 12% more goes in tube than Reg. its not so green —

tested it by dissolving 1/2 oz in HCl a little diluted & used BaCl — no sulphates —

2400 Perforation

1494 Rogers eyelet stock

10 Cobalt flake 24 green
This 20 fuses all in green
made by washing once before filtering & drying & then washing in percolator —

Fed simultaneously by No 1 style —

(flake 1/2 open before green opened)

Wt 7,740

Spring 1/32"

1495 — Wt 7,807

1496 Wt 7,672

5,417 green

7) 23219
7739
5,417.3

2400 Perforation

1497 = Dup of 1494
Except feed by No 2 style
Special green, as on 1494
(flake + green Opening same time)

M stuck in feed plunger Wt 7.695
Spring 1/32"

1498 Wt 7.850

1499 — Wt 7.978

3)23523
7841
73
5.4887

2400 Perforation

1500 ~~[illegible]~~

Rogers' eyeletstock Ni plated

Reg plungers 10 Cobalt flake
24 | Special green –

Two washings before drying &
percolating –

Put in by style No 1 –

(flake 1/2 open before green open)

crack one end
Spring 1/32

Wt 6.574

crack one end
1501

Wt 6,487

1502

Wt 6,223

3.)19234
6411
7
4.4877

2400 Perforation

1503 - Dup of 1500

Except put in by style No 2
(2nd Wash green)
(flake & green opening at same time)

sprung 1/32"
crack both ends

Wt 6.345

1504 crack one end

Wt 6.175

1505

crack one end

Wt 6.102

3) 18.622
6207
7
4,344,9

2400 Perforation

1506 — Rogers eyelet stock Ni plated

Reg plungers —
10 Cornflake
24 speckle green 3 washings
before drying + percolating —
No. 1 style feeding

(flake 1/2 opened before green open)

Wt 6.393

spring 1/32"
crack one end

1507
crack one end

Wt 6.322

1508
crack one end

Wt 6,245

3)18960
6320
7
4,4240

2400 Perforation

1509 Dup of 1506

Except No 2 ~~style~~ feed

(flake & green opened same time –
(3rd wash green)

Wt 6.447

spacing 1/32"

1510 Wt 6.341

1511 — Wt 6.153

3)18.94'
6.31 3/9
4.41 9'

2400 Perforation

1512 Rogers eylet stock burs ground

10 Mdg Co flake

24 goren thes 20 fenes in -
put in style 1 simultaneously
Reg plunger
To be charged 10 hours rest 10 hours
charged 10 rest 10 & charged 10 hours
more & ~~then discharged regular~~ [illegible]
regular thereafter. Lot 6.370
crack on end

Sprung 7/32"

1513 Lot 6.362
The tube was partly loaded when I seen flake
was not feeding very good long pieces in hopper

514 Lot. 6.430

$$3\overline{)19162}$$
6387
7
4,4709

2400 Perforation

1515 Dup of 1512

Except put in Style NO 2
Simultaneously

Sprung 1/32" Wt 6,255

1516 Wt 6,344

1517 Wt 6,502

3)19101
6367

He didnt
chg 10 rest 10
but did it regular

6367
7
4,4569

No 2400 of holes

1518 Rogers by perf burd ground ~~#13~~

10 Co flake
24 mesh green thro 40. fines in
Reg plunger
Put in by style No1 —
Wt 6.313

spring 1/32"
1519 Wt 6.038

1520 Wt 6.079

3)18430
6143
7
4,3001

2400 Perforations

1521 - Dup of 1518 Burns mix 8

Except put in by Style No 2
Reg plunger - 23/ dia -

Spring 1/32" Wt 6.020

1522 Wt 5.917

1523. Wt. 5.850

3)17787
5929
7
4.1503

2400 Perforation ~~#72~~

1524 – Rogers Eyelet big perf – ground off

10 Co flake

24 grain thru 60 mesh fines in

Put in 6c style 701

Reg plunger

spring 1/32 Wt 6.026

1525 Wt 5.858

1526 Wt 6.010

3)17894

5965

7

4.1755

2400 Perforation

1527 Dup of 1524
put in by Style No 2
Reg plunger

sprung $\frac{1}{32}$"
crack one end

Wt 5.940

1528 Wt 6.082

Wt 6.035

1529
crack one end

$3\overline{)18.057}$
6.019

4.2133

2400 Perforation

1530 Rogers big Eylet - Burrs ground

10 Co. flake thro 20
21 mlg green thro 20 fines in
3 mlg Chloride of Potassium -
through 100 mesh fines in

green + Chloride mixed - so 24 mlg
of the mixture goes in ——
put in by stiffle No 1
Reg plunger

Spring 1/32 Wt 6.760

1531 Wt 6.965

cush one end

1532 Wt 6.914

3/20639
6879

After making book takes 2 days
in gallon water containing
10 cc of KOH, Change 3 times
then assemble

6879
4.8153

2400 Perforation

1533 = Dup of 1530
Except mix the flake + 100 mesh
Chloride with each other in
proportion of 100 parts of
flake with 30 parts of Chloride -
using 13 mlg of flake with chloride
21 " of green —
Put in by style No 1
Soak out =

Object is to get the Chloride
mixed with the flake instead
of the green as in previous
group

cut off one end
opening 1/32 Wt 6.630

1534 Wt 6.465

1535 Wt 6.434

~~1536~~

Duplicate all
Groups from 1494
With nickel flake
if they show after
900 milamperes after
the 5th Run —

2400 Perforation Holes

1536 = Rogers Eyelet stock Guns ground off

3.3 Milg Nickel flake
8 Milg Green through 20 times in
Put in Outfit Number 1 –
Three sections put in each time.
then Tamp twice – two on
Reg plunger

Wt

1537 Wt

1538 Wt

2400 Perforations

1539 – Rogers big perf bars ground

5 mlg Nickel flake
12 " green Chro 20 –

Put in by style No 1
Cut Twice put in then Tamp
450 on Reg plunger –

Wf

1540 Wf

1541 Wf

2400 Perforations

1542 Rogers big – burr ground)

5 mlg Nickel flake
12 " Green Club 20

Style No 1
Put 3 sections in then tamp
twice & so on Reg plunger

Cwt

1543 Cwt

1544 Cwt

2400 Perforations

1545 Dup of 1542

Except, dumped 4 sections
then tamp twice + so on
Reg plunger

LWf

1546 LWf

1547 LWf

2400 Perforations —

1548 — Dup of 1545 —

Except put in in 6 sections
then tamp twice —
Reg plugs —

WT

1549 WT

1550 WT

2400 Perforation

1551 = Dup of 1530 -

Except 19 green + 5 Chloride
of Potash mixed in that
proportion - you using
24 of the mix
10 **Nickel** flake Regular

Wt

1552 Wt

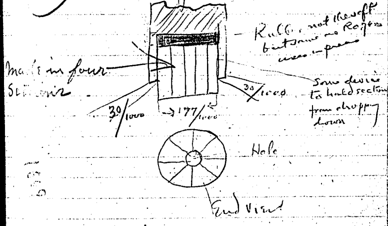
1553 Wt

2400 Perforation

1554 = Rogers big stock Gurrsfield

10 nickel flake
24 green fibro 20

Packed with new plungers
John Ott promised to make


Rubb. not thereoff but same as Rogers uses in press
Made in four Sections
30/1000
177/1000
30/1000
Some device to hold section from chopping down
Hole
End view

cut

1555 cut

1556 — cut

1557 – 2 flat pockets 4.15 grams
Reg [illegible] – Reg pressure
4 nickels –

Charge ~~3~~ 4 times at 300 rate 15 Hours [illegible]charge – Discharge at 800 rate, Each time then charge 300 rate & disch regular rate. This is to determine if very high disch rates will build up the Grav & if it stays up

1558 —

2400 Perforation

1559 = Rogers Big 2 plate 6 burs filed)
Reg plunger —

10 Nickel flake 1/2 thickness
24 green litho 20 ferrous in —
style No 1
Lot 6.215

spring 1/32"

1560 Lot 6.405

1561 Lot 6.223

3)18843
6281
7
43967

2400 Perforation

1562 Dup of 1559

½ thickness Nickel —

Put in by Style No 2

spring 1/32" all Wt 6.265

1563 Wt 6.302

1564 Wt 6.353

1565 Doped   1567 not doped
1566   1568

1565 4 flat cups — Done

4.5 grammes of special now to be made by Ralph Abrogast from Sulphate of Iron free of Vanadium & then into Oxalate,

Ralph is to reduce by H in Ivey small apparatus. putting in Regular percent of dope & make up into pockets & send up for test regular — 2 pockets of the 4 is to have Dope & 2 to not have dope

Fred Ott is to see that Dr Grothe furnishes the Oxalate that Ralph gets it & see that Ralph sends up pockets for test —

1566 1567 1568

2400 Perforations

1569 = Rogers stock burrs filed

10 nickel flake
24 green thru 20 screen
Style No 1

Rubber disk on end plunger

wt

1570 wt

1571 wt

2400 Perforations

1572 = Rogers stock Eurofield

10 Nickel flake Wrought Hydrog

24 green three 20 Mesh

Style No 1 —

Wf

1573 Wf

1574 Cof

2400 Perforation

1575 — Rogers stock —

10 Nickel flake 1/2 thickness

Through Hydrogen —

24 green 1Wco 20 mesh

Style No 1

spacing 1/32 Wt 6.333

1576 Wt 6.225

1577 Wt 6.119

$$3\overline{)18677}$$

6226

7

43582

1578 — 3 Tubes Rogers 2400 -
plunger 245/1000 dia

10 Nickel flake thru 20 -
24 green thru 20 This green is
the special green, many washings before
Drying its in 1 quart bottle marked
XXX — put in by style No 2

spring 1/32 Wt 6.069

1579 Wt 5.945

1580 Wt 5.996

1581 Dup of 1578
Except put in by style 1.
Wt

1582 Wt

1583 Wt

1584 Rogers 2400 (burr ground)
10 Nickel flake
24 green – Reg plunger –
Charged 10 hours rest 10 hours chgd 10 hours
rest 10 hours chgd 10 hours – then
dischgd reg & chemfin run reg –
Style 1 –

CWt.

1585 LWt.

1586 LWt

1587 Dup of 1584.
Except put in style No 2:

Wt

1588 Wt

1589 Wt

1590 — Rogers 2400 burs off -
10 Nickel flake
24 green -
plunger 60/1000 less diameter
put in old Cell No 1

Chgd 10 hours rest 10 hours charge
10 hours rest 10 hours Chgd 10 hours
& dischgd regular & run reg
Unaffected —

Cut

1591 Cut

1592 Cut

1593 Dup of 1590 –
Except put in Style No 2
Wf

1594 Wf

1595 Wf

1595 – Dup of 1467 style 2

to Ge run in 33% KOH,

spacing 1/32" Wt 6.868

1596 Wt 6.957

1597 Wt 6.836

The last two days the air was so damp that the flake did not flow well

1598 Dup of 1467 style 2
With NICKEL Flake
Run in 33% KOH —

Cwt

1599 Cwt

1600 — Cwt

1601 — Roger 2400 Eyelet stock
Ni plated
spiral 10 cobalt flake
24 green through 20 fine in
put in style #2
fewer rings
Peg plunger

Remained straight in loading Wt 6.980

1602 Wt 6.808
" " " "

1603 Rogers 2400 EVE Lot Stock

spiral tube Ni-plated
10 Cobalt flake 20
24 screen through 20 fines in
No Rings

Cam # 2 Style
Peg plunger
wt 6.424

Remained straight in loading

1604 wt 6.435

16 5 Rogers 2400 eyelet stock
Ni plated Spiral tube
10 Nickel flake
24 Green through a finer in
[illegible]
put in #2 style

wt

1606 wt

1107 Rogers 2400 Eyelet stock
N. plated Spiral tube
10 Nickel flake
24 screen through 20 fine in
No rings
put in # 2 Style

Zit

1108

Zit

1609 Dup of 1554 except

10 Cobolt flake
24 green through 20 fines in
Packed with new plunger 4 Sections
Style # 2

cracked one end wt 7.017
Sprung 1/32"
1510 wt 7.050
cracked one end

1611 wt 7.247

1612 Rogers 24000 eyelet Stock
Ni plated tubes

10 mg Co flake through 20 mesh
25 " green through 20 mesh fines in
Loaded with square feed machine
put in by style # 1 reg plunger 237/1000
spring 1/32 wt 6.564

1613 wt 6.544

1614 wt 6.682

plunger fitting close in hole above tube

1615 Dup of 1612

Except put in by style # 2

spring 1/32 wt 6.302

1616 wt 6.339

1617 wt 6.761
crack one end

pi per fitting close in hole above tube

1618 Rogers 2400 eyelet stock
N. plated tubes
10 mg. Co flake 20 mesh
24 " green through 120 " finer in
Loaded with square feed machine
[illegible] in by style # 1. plunger 177/1000 Dia
wt 6.350
spacing 1/32"
1619 wt 6.298

1620 wt 6.328

plunger fitting close in hole above tube

1621 Dup of 1618

Except put in by style #2

spring 1/32 wt 6.343

1622 wt 6,350

1623 wt 6,351

plunger fitting close in hole above tube

1624 Rogers 2400 eyelet Stock
Ni plated tubes
10 mg Co flake through 20 mesh
2% Green through 40 mesh fines in
loaded with square feed machine
put in by style #1 reg plunger 237/10.00 dia

wt 6.817

spring 1/32"

1625 wt 6.695

1626 wt 6.624

plunger fitting close in hole above tube

1627 Dups of 1624

Except put in by style #2

sp ung 1/32 wt 6.222

1628 wt 6.292

1629 wt 6.188

fi ca fiting close in hole above tube

1630 Rogers 2400 Eyelet Stock
Ni plated tube
10 mg Co flake through 20 mesh
24 mg green through 40 mesh pieces in
Loaded with square feed machine
put in by style #1 with plunger 177/1000 dia

spring 1/32 wt 6.485

1631 wt 6.555

1632 wt 6.482

plunger fitting close in hole above tube

1633 Dup of 1630

Except put in by style # 2

spring 1/32" wt 6.441

1634 wt 6.327

1635 wt 6.435

plunger fitting close in hole above tube

1636 Rogers 2400 eyelet stock
N. plated tubes
10 mg. Ca flakes through 20 mesh
24 " green through 60 mesh
Loaded with square feed machine
put in by style # 1 Reg plunger 23/1000
spring 1/32" wt 6.326

1637 wt 6.524

1638 wt 6.398

Plunger fitting close in hole above tube

1639 Dupe of 1636

Except put in by style # 2

wt 6.413

opening 1/32"

1640 wt 6.424

1641 wt 6.406

Pin are fitting close in hole above tube

1642 Rogers 2400 eyelet stock
N. plated tubes
10 mg Co flake through 20 mesh
24 mg green through 60 "
Loaded with equal feed machine
put in by style #1 plunger 177/1000
spring 1/32

wt 6.342

1643 wt 6.494

1644 wt 6.184

plunger fitting close in hole above tube

1645 Dups of 1642

Except put in by style #2

spring 1/32"

wt 6.327

1646 wt 6.257

1647 wt 6.212

Plunger fitting close in hole above tube

1648 Dup of 1536

except Co flake

3.3 mg. Co flake

8 hulls green through 20 pieces in
put in style number 1 —
three sections put in each time
then tamp twice & so on

Reg plunger

Loaded with square feed machine

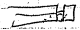
wt 6.048

opening 1/32

1649 wt 6.089

1650 wt 5.970

Plunger fitting close in hole above tube



1651 Dup of 1539
except
5. Mulg Co flake
12 " " green through 20 [illegible]
put in by style number 1—
1st twice put in then Tamp
& so on — Reg plunger
loaded with squear feed machine
wt 5.977
spring 1/32"

1652 wt 6.117

1653 wt 5950

plun r fiting close in hole above tube

1654 Dup 1542

Except Co flake

5 milg Co flake 20

12 " Ogreen through 20 fines in

style number 1—

p t B sections then tamp twice

so on Reg plunger

Loaded with squar feed Machine

wt 5.901

spring 1/32"

1655 wt 6.056

1656 wt 6.042

plunger fitting close in hole above tube

1657 Dup of 1542

Except 00 Flake

Except dumps 4 sections
then tamps twice + so on

Reg plunger

Loaded with squeeze feed machine

wt 5,865

2/aug/'32
1658 wt 5,800

1659 wt 5,883

plunger fitting close in hole above tube

1660 Dup of 1545

Except put in in 6 Sections
then tamp twice

Reg plunger
Loaded with square feed Machine

wt 5,717

sprung 1/32

1661 wt 5,540

1662 wt 5660

Plu in fitting close in hole above tube

1663 Rogers 2400 Eyelet stock
Ni plated tubes
10 Mg. Co flake through 20 mesh
24 Milg. green through 20 mesh binder in
put in by style #1 plunger .245 dia
loaded with square feed Machine

Av. mg 1.32 wt 6.401

1664 wt 6.587

1665 wt 6.483

Plunger having close fit in hole above
tube

1656 Nagean 2400 eyelet stock
Ni plated tubes
10 Wiley Co flakes 20 mesh
4 " green 20 flaxen in
put in style # 2. plunger $\frac{245}{1000}$ dia
Loaded with square feed machine

sprung 1/32

wt 6.712

1657

wt 6.647

1658

wt 6.413

plunger fitting close in hole above tube

1169 Rogers 2400 eyelet stock
Ni plated tubes
10 mils Co flake through 20
24 " Green through 20 fines in
pa tin by style #1 plunger 24/1000 dia
Loaded with square feed machine
Hole above tube same size as in tube

Spring 1/32"

wt 6.317

1170

wt 6.323

1171

wt 6.360

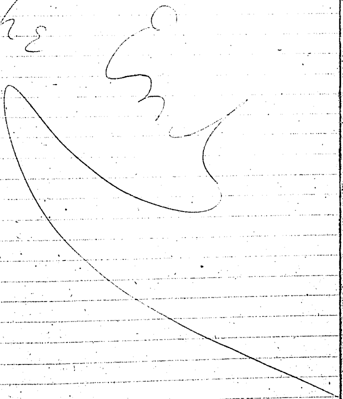
1672 Rogers 2400 eyelet-stock
Dup of 1669
Except pukin # 2 style

spring 1/32 wt 6.244

1673 wt 6.344

1674 wt 6.387

4/5

The